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10/528,108	03/16/2005	Tadayoshi Ito	038440-0119	9116

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EXAMINER
HERRERA, DIEGO D

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/528,108	ITO ET AL.
		Examiner	Art Unit	
		DIEGO HERRERA	2617	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>19 August 2009</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-24</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
           application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail. Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/19/2009 has been entered.

Response to Amendment

Claims 1, 4, 7, 10, 13, and 16; have been amended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Rogard et al. (US 7062294 A1).

Regarding claim 1. A radio cell station apparatus to which a plurality of personal stations can establish space division multiple access (abstract, col. 5 lines: 55—col. 6 lines: 33, Rogard et al. teaches base station and a plurality of personal stations or

mobile terminals and embodiment of applying SDMA use with the invention of Rogard et

al.), one or more reference signals (col. 5 lines: 34-40, Rogard et al. teaches sending

signals from mobile terminals to base station), defined in said radio cell station

apparatus (col. 5 lines: 60—col. 6 lines: 3, Rogard et al. teaches spatial processor for

signals received) and optimized for each multiplexed connection number of the personal

stations establishing said space division multiple access to said radio cell station

apparatus (col. 5 lines: 60—col. 6 lines: 14, Rogard et al. teaches SDMA possible for

downlink direction for a plurality of mobile terminals), said radio cell station comprising:

a multiplexed connection number detection unit for detecting a number of multiplexed

connections of the personal stations establishing space division multiple access during

communication (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various

mechanism to determine downlink smart antenna processing strategy defined in this

case by downlink weighting parameters, hence, information as to multiplexed

connections of devices establishing communication has to be known by base station);

and a reference signal allocation unit (col. 5 lines: 40-55, Rogard et al. teaches

reference signal allocation) for:

switching the reference signals that have been allocated to the personal stations

establishing space division multiple access respectively prior to a change in the number

of multiplexed connections (col. 6 lines: 4-15, Rogard et al. teaches having references

signals for mobile terminals by SDMA protocol for the advantages enhancements for

mobile terminals such as mitigating interference) to reference signals for maintaining

communication quality even alter the number of multiplexed connections is changed,

<u>and allocating</u> the switched reference signals to said plurality of personal stations

respectively, when <u>the</u> change in the number of multiplexed connections is detected

<u>during communication</u> in said multiplexed connection number detection unit (col. 6 lines:

15-55, Rogard et al. teaches SDMA protocol and spatial processor for the advantages

enhancement for mobile terminals such as mitigating interference by using the

weighting parameters and various mechanisms such as calibration factors described in

the reference).

Regarding claim 4. A personal station establishing space division multiple access to a

radio cell station apparatus (abstract, col. 5 lines: 55—col. 6 lines: 33, Rogard et al.

teaches base station and a plurality of personal stations or mobile terminals and

embodiment of applying SDMA use with the invention of Rogard et al.), one or more

reference signals (col. 5 lines: 34-40, Rogard et al. teaches sending signals from mobile

terminals to base station), <u>defined in said radio cell station apparatus (col. 5 lines: 60—</u>

<u>col. 6 lines: 3, Rogard et al. teaches spatial processor for signals received) and</u>

optimized for each multiplexed connection number of the personal station establishing

said space division multiple access to said radio cell station apparatus (col. 5 lines: 60—

col. 6 lines: 14, Rogard et al. teaches SDMA possible for downlink direction for a

plurality of mobile terminals), <u>said radio cell station</u> comprising:

a receiving unit for receiving a request for switching a reference signal from said radio

cell station apparatus in accordance with a change in the number of multiplexed

connections of the personal stations establishing space division multiple access <u>during</u>

<u>communication (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various</u>

mechanism to determine downlink smart antenna processing strategy defined in this

case by downlink weighting parameters, hence, information as to multiplexed

connections of devices establishing communication has to be known by base station);

and

a switching unit for switching the reference signal to a reference signal (col. 6 lines: 4-

15, Rogard et al. teaches having references signals for mobile terminals by SDMA

protocol for the advantages enhancements for mobile terminals such as mitigating

interference) for maintaining communication quality even after the number of

multiplexed connections is changed and transmitting a response to the request for

switching to said radio cell station apparatus (col. 6 lines: 15-55, Rogard et al. teaches

SDMA protocol and spatial processor for the advantages enhancement for mobile

terminals such as mitigating interference by using the weighting parameters and various

mechanisms such as calibration factors described in the reference).

Regarding claim 7. A method of controlling a reference signal performed by a radio cell

station apparatus to which a plurality of personal stations can establish space division

multiple access (abstract, col. 5 lines: 55—col. 6 lines: 33, Rogard et al. teaches base

station and a plurality of personal stations or mobile terminals and embodiment of

applying SDMA use with the invention of Rogard et al.), one or more reference signals,

defined in said radio cell station apparatus (col. 5 lines: 60—col. 6 lines: 3, Rogard et al.

teaches spatial processor for signals received) and optimized for each multiplexed

connection number of the personal stations establishing said space division multiple

access to said radio cell station apparatus (col. 5 lines: 60—col. 6 lines: 14, Rogard et

al. teaches SDMA possible for downlink direction for a plurality of mobile terminals),

said method comprising the steps of:

detecting a number of multiplexed connections of the personal stations establishing

space division multiple access during communication (abstract, col. 5 lines: 55—col. 6

lines: 33, Rogard et al. teaches base station and a plurality of personal stations or

mobile terminals and embodiment of applying SDMA use with the invention of Rogard et

al.); and

when a change in the number of multiplexed connections is detected in said step of

detecting the number of multiplexed connections (abstract, col. 6 lines: 34-55, Rogard et

al. teaches base station various mechanism to determine downlink smart antenna

processing strategy defined in this case by downlink weighting parameters, hence,

information as to multiplexed connections of devices establishing communication has to

be known by base station), switching the reference signals that have been allocated to

the personal stations establishing space division multiple access respectively prior to

change in the number of multiplexed connections to reference signals for maintaining

communication quality even after the number of multiplexed connections is changed,

and allocating the reference signals to said plurality of personal stations respectively

(col. 6 lines: 15-55, Rogard et al. teaches SDMA protocol and spatial processor for the

advantages enhancement for mobile terminals such as mitigating interference by using

the weighting parameters and various mechanisms such as calibration factors

described in the reference).

Regarding claim 10. (Currently Amended) A method of controlling a reference signal performed by a personal station establishing space division multiple access to a radio cell station apparatus (abstract, col. 5 lines: 55—col. 6 lines: 33, Rogard et al. teaches base station and a plurality of personal stations or mobile terminals and embodiment of applying SDMA use with the invention of Rogard et al.), one or more reference signals, defined in said radio cell station apparatus and optimized for each multiplexed connection number of the personal station establishing said space division multiple access to said radio cell station apparatus (col. 5 lines: 60—col. 6 lines: 3, Rogard et al. teaches spatial processor for signals received), said radio method comprising the steps of:

receiving a request for switching a reference signal from said radio cell station apparatus in accordance with change in the number of multiplexed connections of the personal stations establishing space division multiple access during communication (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various mechanism to determine downlink smart antenna processing strategy defined in this case by downlink weighting parameters, hence, information as to multiplexed connections of devices establishing communication has to be known by base station); and switching the reference signal to a reference signal for maintaining communication quality even after the number of multiplexed connections is changed and transmitting a response to the request for switching to said radio cell station apparatus (col. 6 lines: 15-55, Rogard et al. teaches SDMA protocol and spatial processor for the advantages enhancement for

mobile terminals such as mitigating interference by using the weighting parameters and various mechanisms such as calibration factors described in the reference).

Regarding claim 13. (Currently Amended) A computer program embodied in a computer readable medium, for controlling a reference signal performed by a radio cell station apparatus to which a plurality of personal stations can establish space division multiple access (abstract, col. 5 lines: 55—col. 6 lines: 33, Rogard et al. teaches base station and a plurality of personal stations or mobile terminals and embodiment of applying SDMA use with the invention of Rogard et al.), one or more reference signals, defined in said radio cell station apparatus (col. 5 lines: 60—col. 6 lines: 3, Rogard et al. teaches spatial processor for signals received) and optimized for each multiplexed connection number of the personal stations establishing said space division multiple access to said radio cell station apparatus (col. 5 lines: 60—col. 6 lines: 14, Rogard et al. teaches SDMA possible for downlink direction for a plurality of mobile terminals), causing a computer to execute the steps of:

detecting number of multiplexed connections of the personal stations establishing space division multiple access during communication (abstract, col. 5 lines: 55—col. 6 lines: 33, Rogard et al. teaches base station and a plurality of personal stations or mobile terminals and embodiment of applying SDMA use with the invention of Rogard et al.); and

when a change in the number of multiplexed connections is detected in said step of detecting the number of multiplexed connections (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various mechanism to determine downlink smart antenna

processing strategy defined in this case by downlink weighting parameters, hence,

information as to multiplexed connections of devices establishing communication has to

be known by base station), switching the reference signals that have been allocated to

the personal stations establishing space division multiple access respectively prior to

change in the number of multiplexed connections to reference signals (abstract, col. 6

lines: 34-55, Rogard et al. teaches base station various mechanism to determine

downlink smart antenna processing strategy defined in this case by downlink weighting

parameters, hence, information as to multiplexed connections of devices establishing

communication has to be known by base station) for maintaining communication quality

even after the number of multiplexed connections is changed, and allocating the

reference signals to said plurality of personal stations respectively (col. 6 lines: 15-55,

Rogard et al. teaches SDMA protocol and spatial processor for the advantages

enhancement for mobile terminals such as mitigating interference by using the

weighting parameters and various mechanisms such as calibration factors described in

the reference).

Regarding claim 16. (Currently Amended) A computer program embodied in a

computer readable medium, for controlling a reference signal performed by a personal

station establishing space division multiple access to a radio cell station apparatus

(abstract, col. 5 lines: 55—col. 6 lines: 33, Rogard et al. teaches base station and a

plurality of personal stations or mobile terminals and embodiment of applying SDMA

use with the invention of Rogard et al.), one or more reference signals, defined in said

radio cell station apparatus (col. 5 lines: 60—col. 6 lines: 3, Rogard et al. teaches

spatial processor for signals received) and optimized for [[for]] each multiplexed connection number of the personal stations establishing said space division multiple access to said radio cell station apparatus (col. 5 lines: 60—col. 6 lines: 14, Rogard et al. teaches SDMA possible for downlink direction for a plurality of mobile terminals), causing a computer to execute the steps of:

receiving a request for switching a reference signal from said radio cell station apparatus in accordance with change in the number of multiplexed connections of the personal stations establishing space division multiple access during communication (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various mechanism to determine downlink smart antenna processing strategy defined in this case by downlink weighting parameters, hence, information as to multiplexed connections of devices establishing communication has to be known by base station); and switching the reference signal to a reference signal for maintaining communication quality even after the number of multiplexed connections is changed and transmitting a response to the request for switching to said radio cell station apparatus (col. 6 lines: 15-55, Rogard et al. teaches SDMA protocol and spatial processor for the advantages enhancement for mobile terminals such as mitigating interference by using the weighting parameters and various mechanisms such as calibration factors described in the reference).

Consider claim 2. The radio cell station apparatus according to claim 1, further comprising a storage unit for storing a reference signal optimized for each number of multiplexed connections of the personal stations establishing space division multiple

access, wherein when the number of multiplexed connections of the personal stations

establishing space division multiple access is changed, said reference signal allocation

unit selects reference signals optimal for the changed number of multiplexed

connections from said storage unit and allocates the selected reference signals to said

plurality of personal stations respectively (col. 8 lines: 39-45, Rogard et al. teaches that

the smart antenna system changes the number of signals to accommodate in

download).

Consider claim 3. The radio cell station apparatus according to claim 2, wherein said

reference signal stored in said storage unit is calculated for each number of multiplexed

connections based on a high autocorrelation characteristic and a low cross-correlation

characteristic (col. 9 lines: 50—col. 10 lines: 5, Rogard et al. teaches correlation

means).

Consider claim 5. The personal station according to claim 4, further comprising a

storage unit for storing a reference signal optimized for each number of multiplexed

connections of the personal stations establishing space division multiple access,

wherein when the request for switching the reference signal is received from said radio

cell station apparatus, a reference signal optimal for the changed number of multiplexed

connections is selected from said storage unit and a response to the request for

switching including the selected reference signal is transmitted to said radio cell station

apparatus (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various

mechanism to determine downlink smart antenna processing strategy defined in this

case by downlink weighting parameters, hence, information as to multiplexed

connections of devices establishing communication has to be known by base station).

Consider claim 6. The personal station according to claim 5, wherein said reference

signal stored in said storage unit is calculated for each number of multiplexed

connections based on a high autocorrelation characteristic and a low cross- correlation

characteristic (col. 9 lines: 50—col. 10 lines: 5, Rogard et al. teaches correlation

means).

Consider claim 8. (Original) The method of controlling a reference signal according to

claim 7, further comprising the step of storing a reference signal optimized for each

number of multiplexed connections of the personal stations establishing space division

multiple access, wherein when the number of multiplexed connections of the personal

stations establishing space division multiple access is changed, reference signals

optimal for the changed number of multiplexed connections that have been stored are

selected and the selected reference signals are allocated to said plurality of personal

stations respectively (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station

various mechanism to determine downlink smart antenna processing strategy defined in

this case by downlink weighting parameters, hence, information as to multiplexed

connections of devices establishing communication has to be known by base station).

Consider claim 9. (Original) The method of controlling a reference signal according to

claim 8, Wherein the step of storing a reference signal optimized for each number of

multiplexed connections of the personal stations establishing space division multiple

access further includes the step of calculating a reference signal for each number of

multiplexed connections based on a high autocorrelation characteristic and a low cross-correlation characteristic (col. 9 lines: 50—col. 10 lines: 5, Rogard et al. teaches correlation means).

Consider claim 11. (Original) The method of controlling a reference signal according to claim 10, further comprising the step of storing a reference signal optimized for each number of multiplexed connections of the personal stations establishing space division multiple access, wherein when the request for switching the reference signal is received from said radio cell station apparatus, a reference signal optimal for the changed number of multiplexed connections that has been stored is selected and a response to the request for switching including the selected reference signal is transmitted to said radio cell station apparatus <u>(abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various mechanism to determine downlink smart antenna processing strategy defined in this case by downlink weighting parameters, hence, information as to multiplexed connections of devices establishing communication has to be known by base station)</u>.

Consider claim 12. (Original) The method of controlling a reference signal according to claim 11, wherein the step of storing a reference signal optimized for each number of multiplexed connections of the personal stations establishing space division multiple access further includes the step of calculating a reference signal for each number of multiplexed connections based on a high autocorrelation characteristic and a low cross-correlation characteristic (col. 9 lines: 50—col. 10 lines: 5, Rogard et al. teaches correlation means).

Consider claim 14. (Previously Presented) The computer program embodied in a computer readable medium, for controlling a reference signal according to claim 13, further causing the computer to execute the step of storing a reference signal optimized for each number of multiplexed connections of the personal stations establishing space division multiple access, wherein when the number of multiplexed connections of the personal stations establishing space division multiple access is changed, reference signals optimal for the changed number of multiplexed connections that have been stored are selected and the selected reference signals are allocated to said plurality of personal stations respectively (abstract, col. 6 lines: 34-55, Rogard et al. teaches base station various mechanism to determine downlink smart antenna processing strategy defined in this case by downlink weighting parameters, hence, information as to multiplexed connections of devices establishing communication has to be known by base station).

Consider claim 15. (Previously Presented) The computer program embodied in a computer readable medium, for controlling a reference signal according to claim 14, wherein the step of storing a reference signal optimized for each number of multiplexed connections of the personal stations establishing space division multiple access further causes the computer to execute the step of calculating a reference signal for each number of multiplexed connections based on a high autocorrelation characteristic and a low cross-correlation characteristic (col. 9 lines: 50—col. 10 lines: 5, Rogard et al. teaches correlation means).

Consider claim 17. (Previously Presented) The computer program embodied in a computer readable medium, for controlling a reference signal according to claim 16, further causing the computer to execute the step of storing a reference signal optimized for each number of multiplexed connections of the personal stations establishing space division multiple access, wherein when the request for switching the reference signal is received from said radio cell station apparatus, a reference signal optimal (col. 5 lines: 40-55) for the changed number of multiplexed connections that has been stored is selected and a response to the request for switching including the selected reference signal is transmitted to said radio cell station apparatus (col. 8 lines: 39-45, Rogard et al. teaches that the smart antenna system changes the number of signals to accommodate in download).

Consider claim 18. (Previously Presented) The computer program embodied in a computer readable medium, for controlling a reference signal according to claim 17, wherein the step of storing a reference signal optimized (col. 5 lines: 40-55) for each number of multiplexed connections of the personal stations establishing space division multiple access further causes the computer to execute the step of calculating a reference signal for each number of multiplexed connections based on a high autocorrelation characteristic and a low cross-correlation characteristic (col. 9 lines: 50—col. 10 lines: 5, Rogard et al. teaches correlation means).

Consider claim 19. (Previously Presented) The radio cell station apparatus according to claim 1, wherein an optimal reference signal pattern (col. 5 lines: 40-55) for each multiplexed connection number is defined on condition that each signal for said

personal station establishing space division multiple access can be separated and extracted in a stable manner (col. 6 lines: 15-55, Rogard et al. teaches weighting factors and filtering means for processing parameters for signals by spatio-temporal or spatial processing).

Consider claim 20. (Previously Presented) The personal station according to claim 4, wherein an optimal reference signal pattern for each multiplexed connection number is defined on condition that each signal for said personal station establishing space division multiple access can be separated and extracted in a stable manner (col. 6 lines: 15-55, Rogard et al. teaches weighting factors and filtering means for processing parameters for signals by spatio-temporal or spatial processing).

Consider claim 21. (Previously Presented) The method of controlling a reference signal according to claim 7, wherein an optimal reference signal pattern for each multiplexed connection number is defined on condition that each signal for said personal station establishing space division multiple access can be separated and extracted in a stable manner (col. 6 lines: 15-55, Rogard et al. teaches weighting factors and filtering means for processing parameters for signals by spatio-temporal or spatial processing).

Consider claim 22. (Previously Presented) The method of controlling a reference signal according to claim 10, wherein an optimal reference signal pattern for each multiplexed connection number is defined on condition that each signal for said personal station establishing space division multiple access can be separated and extracted in a stable manner (col. 6 lines: 15-55, Rogard et al. teaches weighting factors

and filtering means for processing parameters for signals by spatio-temporal or spatial processing).

Consider claim 23. (Previously Presented) The computer program, embodied in a computer readable medium, for controlling a reference signal according to claim 13, wherein an optimal reference signal pattern for each multiplexed connection number is defined on condition that each signal for said personal station establishing space division multiple access can be separated and extracted in a stable manner (col. 6 lines: 15-55, Rogard et al. teaches weighting factors and filtering means for processing parameters for signals by spatio-temporal or spatial processing).

Consider claim 24. (Previously Presented) The computer program, embodied in a computer readable medium, for controlling a reference signal according to claim 16, wherein an optimal reference signal pattern for each multiplexed connection number is defined on condition that each signal for said personal station establishing space division multiple access can be separated and extracted in a stable manner (col. 6 lines: 15-55, Rogard et al. teaches weighting factors and filtering means for processing parameters for signals by spatio-temporal or spatial processing).

<div align="center">

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Herrera/
Examiner, Art Unit 2617

/LESTER KINCAID/
Supervisory Patent Examiner, Art Unit 2617